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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,735	11/15/2001	Mohammad Hajaligol	021238-410	7422
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EXAMINER LOPEZ, CARLOS N				
ART UNIT		PAPER NUMBER		
1731				

DATE MAILED: 03/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/987,735	<b>Applicant(s)</b> HAJALIGOL ET AL.	
	<b>Examiner</b> Carlos Lopez	<b>Art Unit</b> 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13, 16-25, 28-30, 33-44 and 47-51 is/are rejected.
- 7) ☒ Claim(s) 14, 15, 26, 27, 31, 32, 45, 46, 52 and 53 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/15/03 has been entered.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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1) Claims 1, 9, 10, 16-18, 23-24, and 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Dashley et al (US 4,607,647). Dashley teaches adding a heat degradable filler particle, ethylene vinyl acetate (EVA), to a cigarette wrapping paper (Abstract). Dashley's heat degradable filler particle may be added in the papermaking stage, feed stock of a paper machine pulp furnish (Column 2, lines 11-13). In view that Dashley meets the limitations of claims 1, 16, and 18, reciting a cigarette paper wrapper having a heat degradable filler particle which is defined by Applicant to include EVA, it is deemed that the additional limitation of increasing the porosity of the cigarette paper wrapper is inherent in the Dashley cigarette paper wrapper.

As for claim 16-17, the steps of providing a cut filler to form a tobacco rod, placing the paper wrapper around the tobacco rod to form a cigarette, lighting the cigarette, and inhaling the smoke are inherent steps in the manufacturing of a cigarette and steps by the smoker to smoke the cigarette.

The term "up to" may include zero as its lower limit (In re Mochel (CCPA) 176 USPQ 194), the mere presence of EVA meets the limitations set forth in claims 29-30.

2) Claims 1, 10, 16-18, 24 and 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Barnes et al (US 5,105,837). Barnes teaches adding a heat degradable filler particle, disodium phosphate, to the pulp during the papermaking process to thus form a cigarette wrapping paper (Claim 8 and Example 7). Barnes is silent disclosing the heat degradable filler particle capable of being dissipated during smoking to increase the porosity of the cigarette paper wrapper. In view that Barnes et al meet the

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limitations of claims 1, 16, and 18, reciting a cigarette paper wrapper having a heat degradable filler particle which is defined by Applicant to include disodium phosphate, it is deemed that the additional limitation of increasing the porosity of the cigarette paper wrapper is inherent in the Barnes cigarette paper wrapper.

As for claim 16-17, the steps of providing a cut filler to form a tobacco rod, placing the paper wrapper around the tobacco rod to form a cigarette, lighting the cigarette, and inhaling the smoke are inherent steps in the manufacturing of a cigarette and steps by the smoker to smoke the cigarette.

The term "up to" may include zero as its lower limit (In re Mochel (CCPA) 176 USPQ 194), the mere presence of disodium phosphate meets the limitations set forth in claims 29-30.

3) Claims 1, 6-13, 16-18, 20-25, 33-36, 40-44, 47, 49-51 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Stewart, Jr. et al (US 3,805,799). Stewart discloses cigarette comprising a cigarette wrapper having heat degradable filler particles coated onto an air permeable paper. The particles are melted/dissipated during smoking of the cigarette (Abstract). The wrapper (14) is an air-pervious porous paper (Col. 3, lines 19ff). The inner layer of the permeable paper wrapper (14) is coated with an air-impervious material (18) such as those disclosed in US 2,992,647, US 3,526,904 and US 3,511,247. The outer layer of the wrapper (14) is also coated with an air-impervious coating (20) selected from cellulose acetate, other cellulose esters, polyoxyethylene, polyethylene, polypropylene and polystyrene. While Stewart is silent disclosing that some of the filler particles of the

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coatings (18) and (20) are completely surrounded by the air permeable paper it is deemed as being inherent or in the alternative, as obvious to a person of ordinary skill in the art in view that an air permeable paper, which has pores therein, would have some of the filler particles which coats the permeable paper within its pores and thus have some particles completely surrounded by the paper as claimed by applicant.

As noted by Stewart the filler particles may be selected from Figge (US 2,992,647). Figge discloses cigarette comprising heat degradable filler particles such as polyethylene, cellulose compounds and monosodium phosphate (Figge Col. 2, lines 65ff).

As for claims 6-8, 20-22, 33-35, 40 and 49, as noted by Figge, the particles may dissipate in a temperature between 35 to 250°C (Column 2, line 63ff).

As for claims 9-11 and 23-25, the heat degradable filler particles may be polyethylene cellulose or monosodium phosphate (MSP) (Figge Column 2, lines 66ff).

As for claims 12 and 43, as shown by Figge (Column 3, lines 22-46), the heat degradable filler particles will dissipate at Applicant's claimed distance depending on the melting point of the filler particle.

As for claim 16-17, the steps of providing a cut filler to form a tobacco rod, placing the paper wrapper around the tobacco rod to form a cigarette, lighting the cigarette, and inhaling the smoke are inherent steps in the manufacturing of a cigarette and steps by the smoker to smoke the cigarette.

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4) Claims 2-5, 19, 37-39 and 48 are rejected under 35 U.S.C. 103(a) as obvious over Stewart, Jr. et al (US 3,805,799) in view of Figge (US 2,992,647). Stewart is silent disclosing the claimed porosity and air dilution of the cigarette. However, Figge teaches that as the heat degradable filler particles dissipate, the perforations of the wrapper will open to adjust the air dilution and prevent the combustion temperature of the cigarette to exceed 650-700°C (Column 2, lines 21ff). Figge also teaches that combustion temperatures above 700°C produce major quantities of carcinogens (Column 4, lines 44-46) and thus it is advantageous to prevent the combustion temperature from exceeding 700°C. In view that air dilution may be used to accurately control the combustion temperature range as taught by Figge (Column 4, lines 42-43) and that applicant's combustion temperature is maintained at about 600 to 750°C, one of ordinary skill in the art at the time the invention was made would have provided air dilution and consequently the porosity of the paper, as claimed by Applicant, to control the combustion temperature from going above 700°C in Stewart's cigarette because it would prevent major quantities of carcinogens to be produced at a combustion temperature above 700°C.

5) Claims 1, 5-13, 16-18, 20-25 are rejected under 35 U.S.C. 102 (b) as being anticipated by Figge (US 2,992,647). Figge discloses cigarette comprising heat degradable filler particles in the cigarette paper wrapper, which are melted/dissipated during smoking of the cigarette (Column 2, lines 50-72); results in an increased porosity of the cigarette paper (Column 2, lines 55ff). As noted by Figge in col. 2, line 28, the perforation of the paper wrapper or pores may be filled with the filler particles, thus

clearly showing that "at least some of the heat-degradable filler particles completely surrounded" by the pores of the paper.

As for claim 5, the temperature is between 650 to 700 degrees Celsius (Col. 2, line 35).

As for claims 6-8 and 21-22, the particles may dissipate in a temperature between 35 to 250°C (Column 2, line 63ff).

As for claims 9-11 and 23-25, the heat degradable filler particles may be polyethylene cellulose or monosodium phosphate (MSP) (Column 2, lines 66ff).

As for claims 12, as shown by Figge (Column 3, lines 22-46), the heat degradable filler particles will dissipate at Applicant's claimed distance depending on the melting point of the filler particle.

As for the method claims 16 and 17, the active steps of providing cut filler and placing a wrapper around the tobacco rod are inherent steps in making a cigarette.

**6)** Claims 1, 3, 4 10, 16-18, and 24 are rejected under 35 U.S.C. 103(a) as unpatentable over Tamol (US 3,526,904). Tamol discloses cigarette comprising heat degradable filler particles (polyethylene oxide) in the cigarette paper wrapper, which are melted/dissipated during smoking of the cigarette (Abstract), to open the perforations blocked by the heat degradable filler particles. The unplugging of the perforations due to the melting of the heat degradable filler particles results in an increased porosity of the cigarette paper. As noted by Tamol's examples, the water soluble filler is added to the paper wrapper. While Tamol is silent disclosing that some of the filler is surrounded by the paper, it is considered as obvious to a person of ordinary skill in the art that due



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to the fibrous nature of the paper having interstices therein would result in some of the filler particles being incorporated into the web and thus be completely surrounded by the paper.

As for claim 3-4, air dilution increase from 19% to 42% (Example 3).

As for claim 2, in view that Tamol provides shares the same air dilution as claimed by applicant, the claimed porosity would be inherent in Tamol.

As for the method claims 16 and 17, the active steps of providing cut filler and placing a wrapper around the tobacco rod are inherent steps in making a cigarette.

7) Claims 2-5, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Figge (US 2,992,647). As pointed out by Figge, as the heat degradable filler particles dissipate, the perforations of the wrapper will open to adjust the air dilution to prevent the combustion temperature of the cigarette to exceed 650-700°C (Column 2, lines 21ff). Figge also teaches that combustion temperatures above 700°C produce major quantities of carcinogens (Column 4, lines 44-46) and thus it is advantageous to prevent the combustion temperature from exceeding 700°C. In view that air dilution may be used to accurately control the combustion temperature range (Column 4, lines 42-43) and that applicant's combustion temperature is maintained at about 600 to 750°C, one of ordinary skill in the art at the time the invention was made would have provided air dilution and porosity as claimed by Applicant to control the combustion temperature from going above 700°C because it would prevent major quantities of carcinogens to be produced at a combustion temperature above 700°C.

8) Claims 1, 6-8, 12, 16-18, 20-22 are rejected, under 35 U.S.C. 103(a) as unpatentable over Adam et al (US 4,784,164). Adams discloses cigarette comprising a porous paper wrapper coated with heat degradable filler particles in order to reduce its porosity (abstract). The heat of the lighted cigarette would then remove the coating and thus result in an increase of the porosity of the paper wrapper. As best shown in the examples a porous paper wrapper is coated with heat degradable filler particles. While Adam is silent disclosing that some of the filler particles of the coating is completely surrounded by the air permeable paper as obvious to a person of ordinary skill in the art in view that an air permeable porous paper being coated with heat degradable filler particles would have some of the filler particles within the pores of the paper wrapper and thus have some particles completely surrounded by the paper.

As for claims 6-8 and 20-22, the particles may dissipate in a temperature generally above 50°C but below 150°C (Column 4, line 5ff).

As for claims 12, as shown by Adam above, it is inherent that the heat degradable filler particles will dissipate at Applicant's claimed distance as evidenced by Figge (See Column 3, lines 22ff of Figge).

As for the method claims 16 and 17, the active steps of providing cut filler and placing a wrapper around the tobacco rod are inherent steps in making a cigarette.

***Allowable Subject Matter***

Claims 14-15, 26-27, 31-32, 45-46, and 52-53 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The cited prior art fails to disclose or reasonably suggest cigarette paper wrapper free of perforations prior to smoking of the cigarette and wherein said heat-degradable filler particles are capable of being dissipated during smoking of the cigarette to increase the porosity of the cigarette paper wrapper in combination with the average filler particles size recited in claims 14-15, 26-27, 31-32, 45-46, and 52-53.

### ***Response to Arguments***

Applicant's arguments filed 12/15/03 have been fully considered but they are not persuasive. Applicant's arguments in regards to Tamol, Figge, Adam, Dashley and Barnes are directed to the allegation that said references fail to disclose or suggest "a cigarette paper wrapper having heat-degradable filler particles therein, wherein at least some of the particles are completely surrounded by the paper." Applicant further cites that the method of making the instant claimed invention is through a wet end addition of the fillers during the papermaking process. Said arguments are found unpersuasive. First applicant does not claim a product by process that would thus require the USPTO to give weight to the process by which the cigarette is made resulting in a distinct paper wrapper having particles fillers therein as opposed to a paper wrapper coated with filler particles. Secondly, it is held that due to the nature of the paper web, being fibrous and porous, it would allow for some the fillers particles being coated onto the paper web to migrate into the interstices of the paper web and thus result in some particles fillers being completely surrounded by the web.

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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos Lopez whose telephone number is 571.272.1193. The examiner can normally be reached on Mon.-Fri. 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571.272.1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CL

  
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